

FED. ROAD DIST. NO.	STATE	FED. AID. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-058-1(2)	1992	14	17

ELECTRICAL SYMBOLS

EXIST

NEW

WOODEN UTILITY POLE

WOODEN UTILITY POLE WITH STREET LIGHT

WOODEN UTILITY POLE WITH STREET LIGHT TO BE RELOCATED

RELOCATED UTILITY POLE WITH STREET LIGHT

POLE GUY AND ANCHOR

UTILITY METER OR EQUIPMENT

POLE MOUNTED TRANSFORMER

STREETLIGHT AND PULLBOX NEAR BASE. ALL 150W HPS IES TYPE II MED. SEMI-CUTOFF LUMINAIRE, 28 FT. MTG. HT.

OVERHEAD PRIMARY LINES

OVERHEAD SECONDARY LINES

OVERHEAD STREET LIGHT LINES

OVERHEAD MESSENGER CABLE

GUY WIRE

WIRING IN RACEWAY BELOW GRADE.

CONDIT STUB

NOTES:

1. RELOCATION OF EXISTING UTILITY POLES AND ELECTRICAL LINES SHALL BE PERFORMED BY CITIZENS UTILITIES COMPANY.

2. RELOCATION OF TELEPHONE LINES SHALL BE PERFORMED BY HAWAIIAN TELEPHONE COMPANY, KAUAI, AND COORDINATED WITH WORK BY CITIZENS UTILITIES COMPANY.

3. RELOCATION OF STREET LIGHT LUMINAIRES ON UTILITY POLES SHALL BE BY CITIZENS UTILITIES COMPANY.

SURVEY PLOTTED BY	DATE
DRAWN BY	
CHECKED BY	
REVISIONS BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
NO.	

NAWILIWILI
BEACH
PARK

ALBERT S. C. CHONG

REGISTERED PROFESSIONAL ENGINEER

No. 1023-E

HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

Albert S. C. Chong

STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

HIGHWAYS DIVISION

ROADWAY ELECTRICAL PLAN

AND SYMBOLS

WAAPA ROAD & NAWILIWILI ROAD

INTERSECTION IMPROVEMENTS

F.A. PROJECT NO. STP-058-1(2)

SCALE: AS SHOWN

DATE: MARCH 1992

SHEET NO. 14 OF 4 SHEETS

14

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

WAAPA ROAD & NAWILIWILI ROAD
INTERSECTION IMPROVEMENTS
F.A. PROJECT NO. STP-058-1(2)

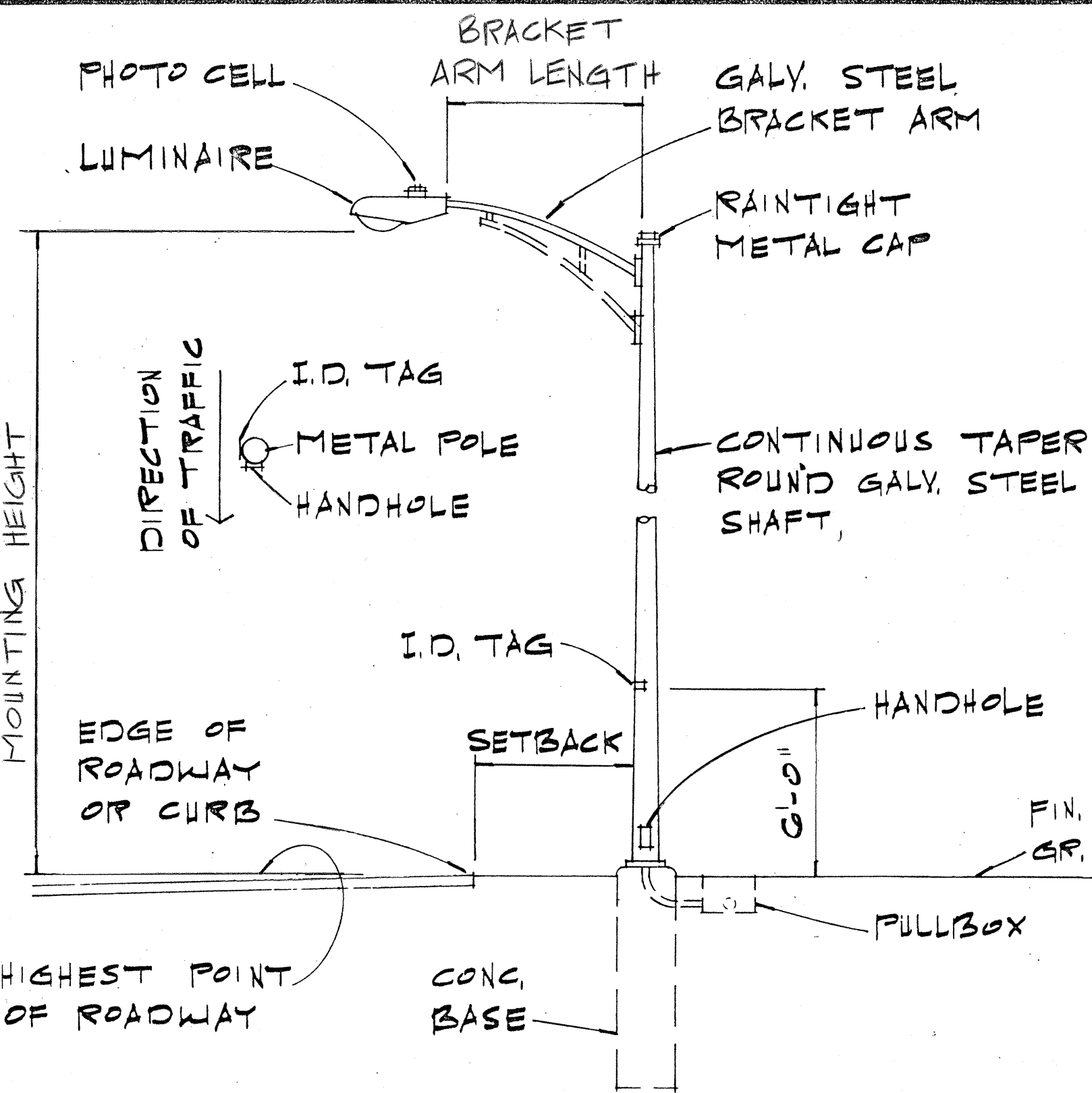
SHEET No.E2 OF 4 SHEETS



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-058-102	1992	16	17

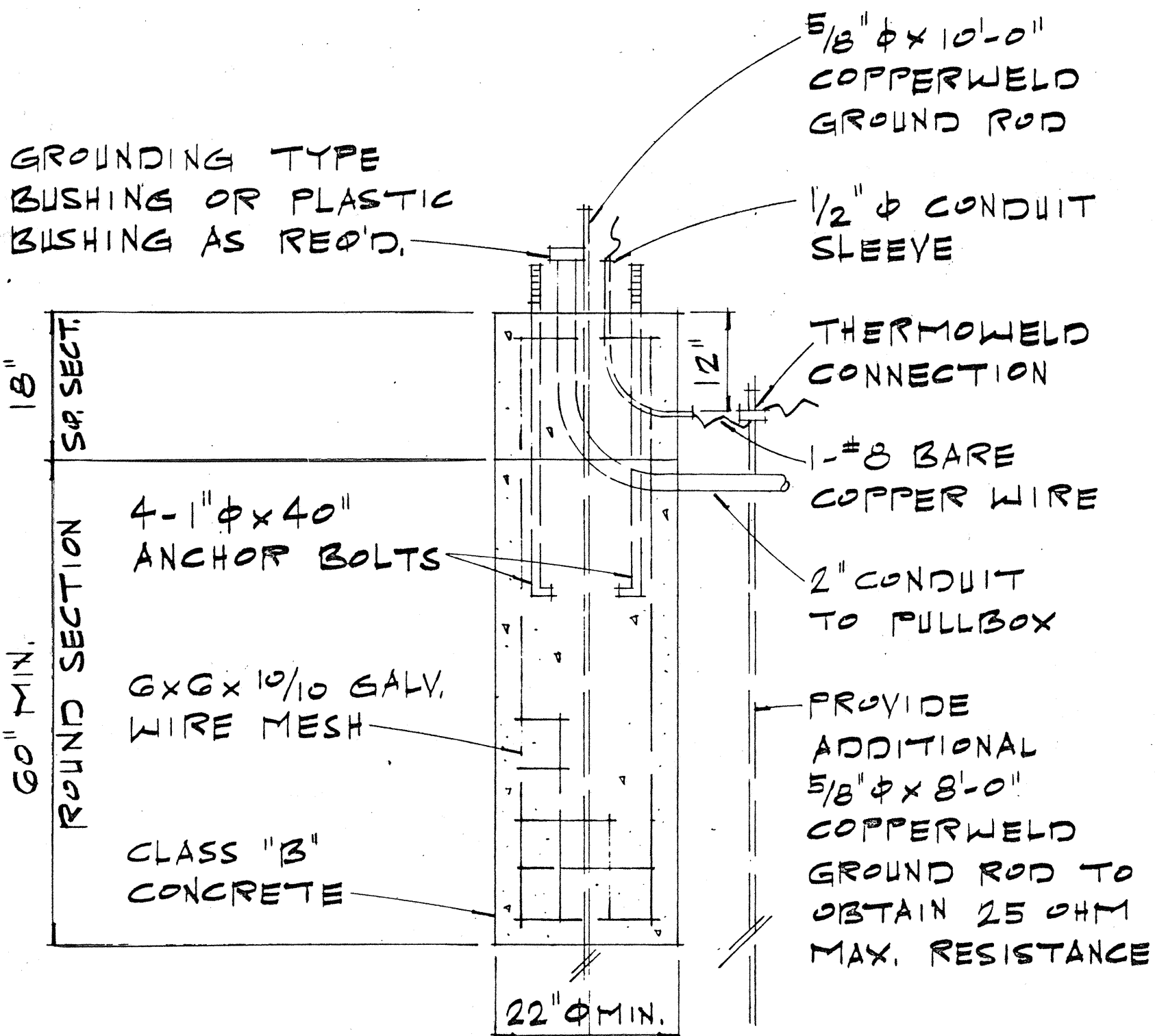
GENERAL NOTES

- ALL LUMINAIRES SHALL BE HIGH PRESSURE SODIUM TYPE W/ WATTAGE & IES TYPE LIGHT DISTRIBUTION AS SHOWN ON PLANS.
- ALL SECONDARY CIRCUIT EXTENSIONS TO SERVICE SHALL BE PROVIDED BY CONTRACTOR. ALL CONNECTIONS MADE BY SUBJECT TO CHARGE SHALL BE PAID BY THE CONTRACTOR.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING & INFORMING OF STREET LIGHT LOCATIONS ON PROJECT SITE PRIOR TO INSTALLATION OF SECONDARY CIRCUIT CONNECTION.
- THE CONTRACTOR SHALL NOTIFY & COORDINATE WORK W/ THE STATE ELECTRICAL MAINTAINANCE SECTION, ADD: PH.# 72 HOURS IN ADVANCE OF COMMENCING INSTALLATION OF STREET LIGHT SYSTEM.
- THE CONTRACTOR SHALL LOCATE & VERIFY EXISTING STREET LIGHT SECONDARY VOLTAGE BEFORE ORDERING LIGHTING EQUIPMENT.



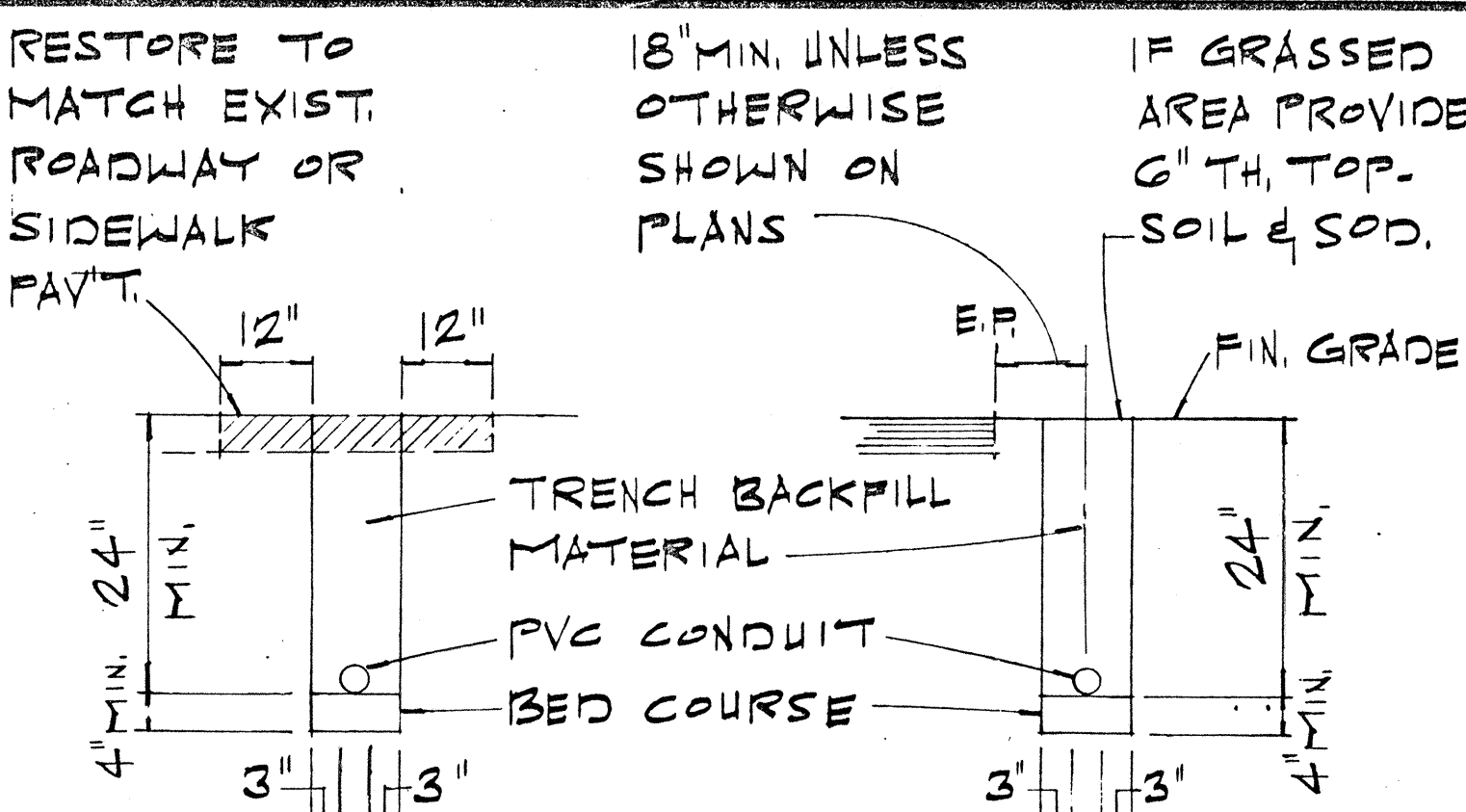
STREET LIGHT DETAIL

SCALE: 1/4" = 1'-0"



CONCRETE BASE DETAIL

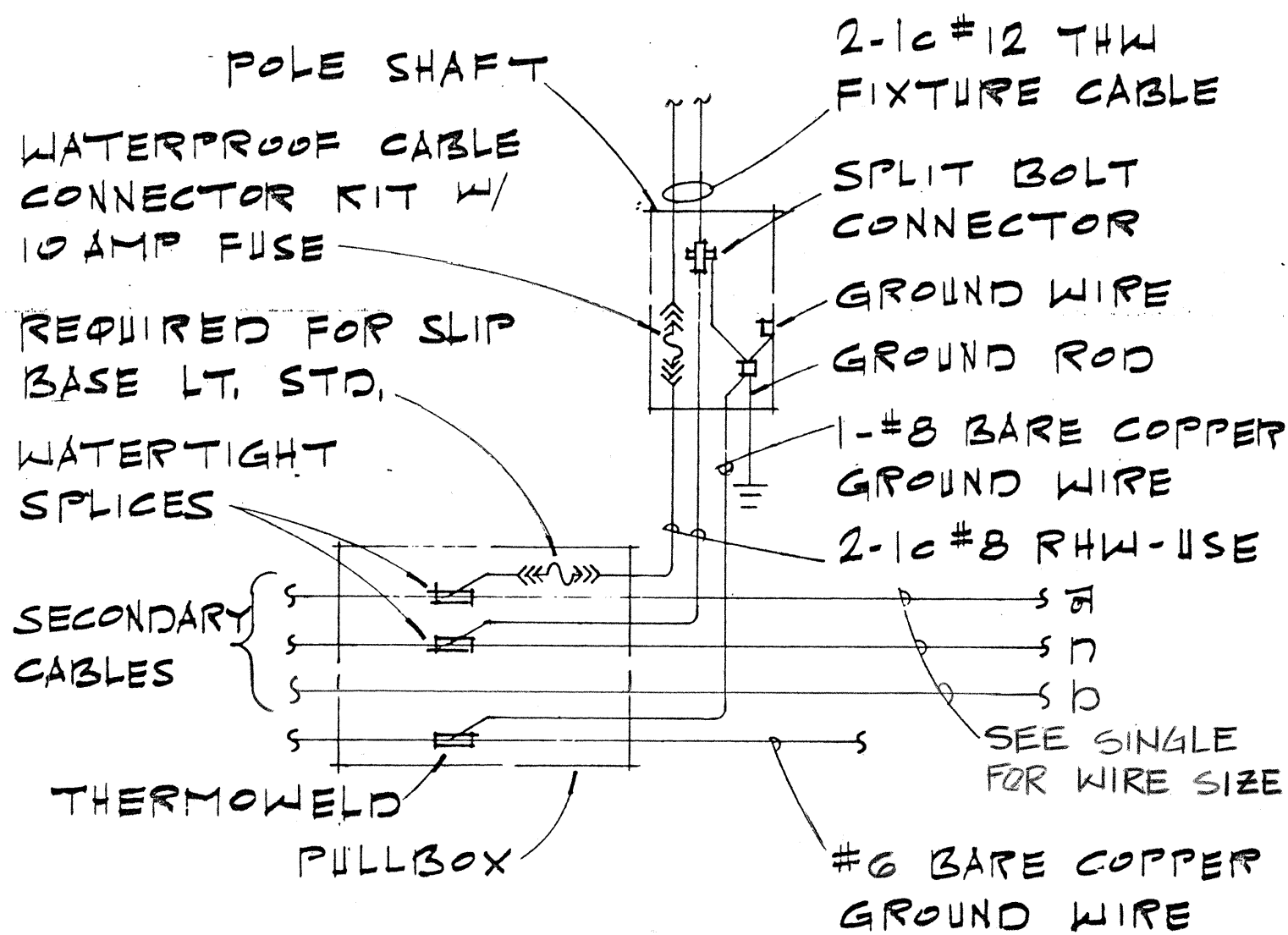
SCALE: 3/4" = 1'-0"



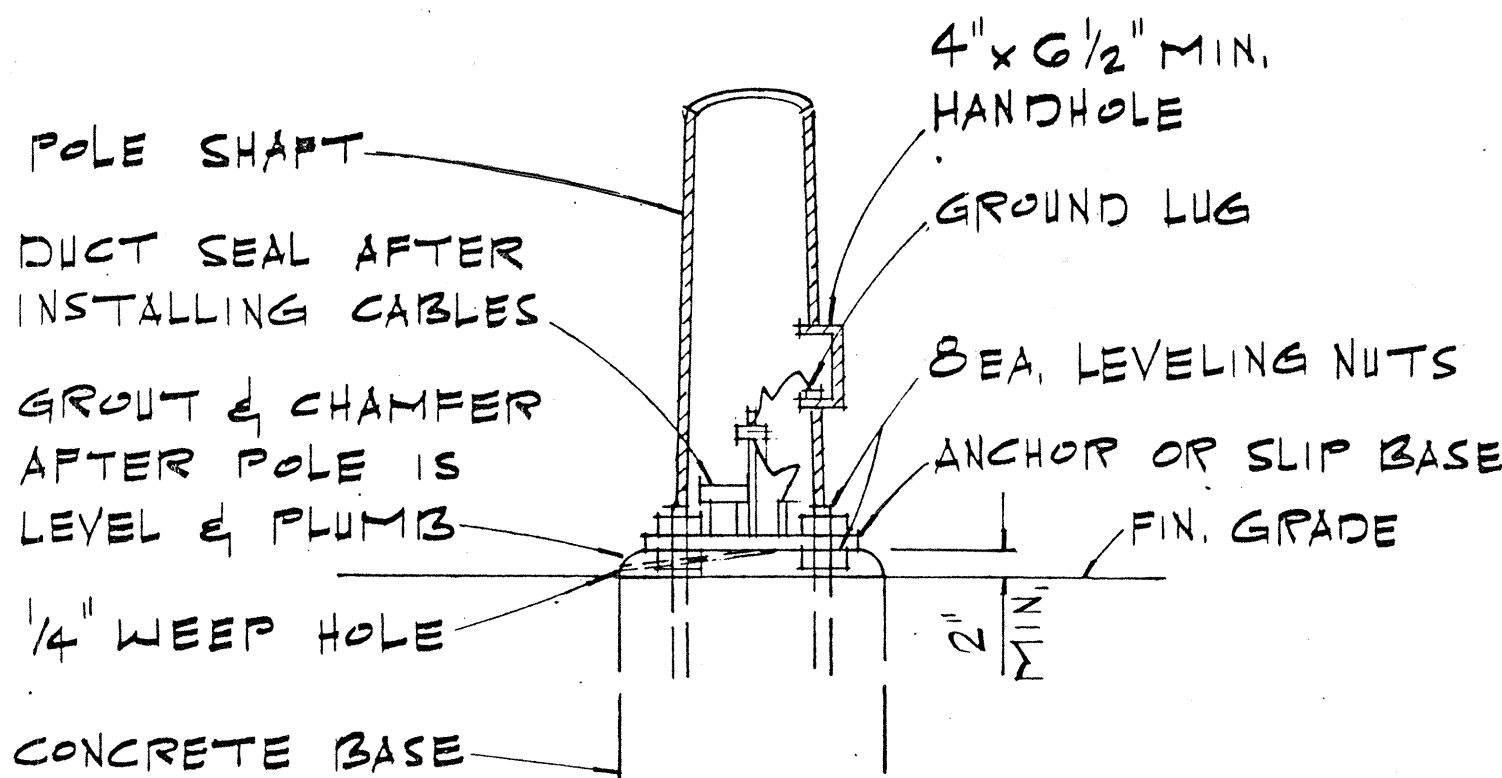
ROAD CROSSING EDGE OF SHOULDER OR CURB CROSSING

TYPICAL DUCT SECTION DETAIL

NOTE: SCALE: 1/2" = 1'-0"
FOR MULTIPLE CONDUIT LAYOUTS PROVIDE 3" CL. SPACING BETWEEN CONDUITS.

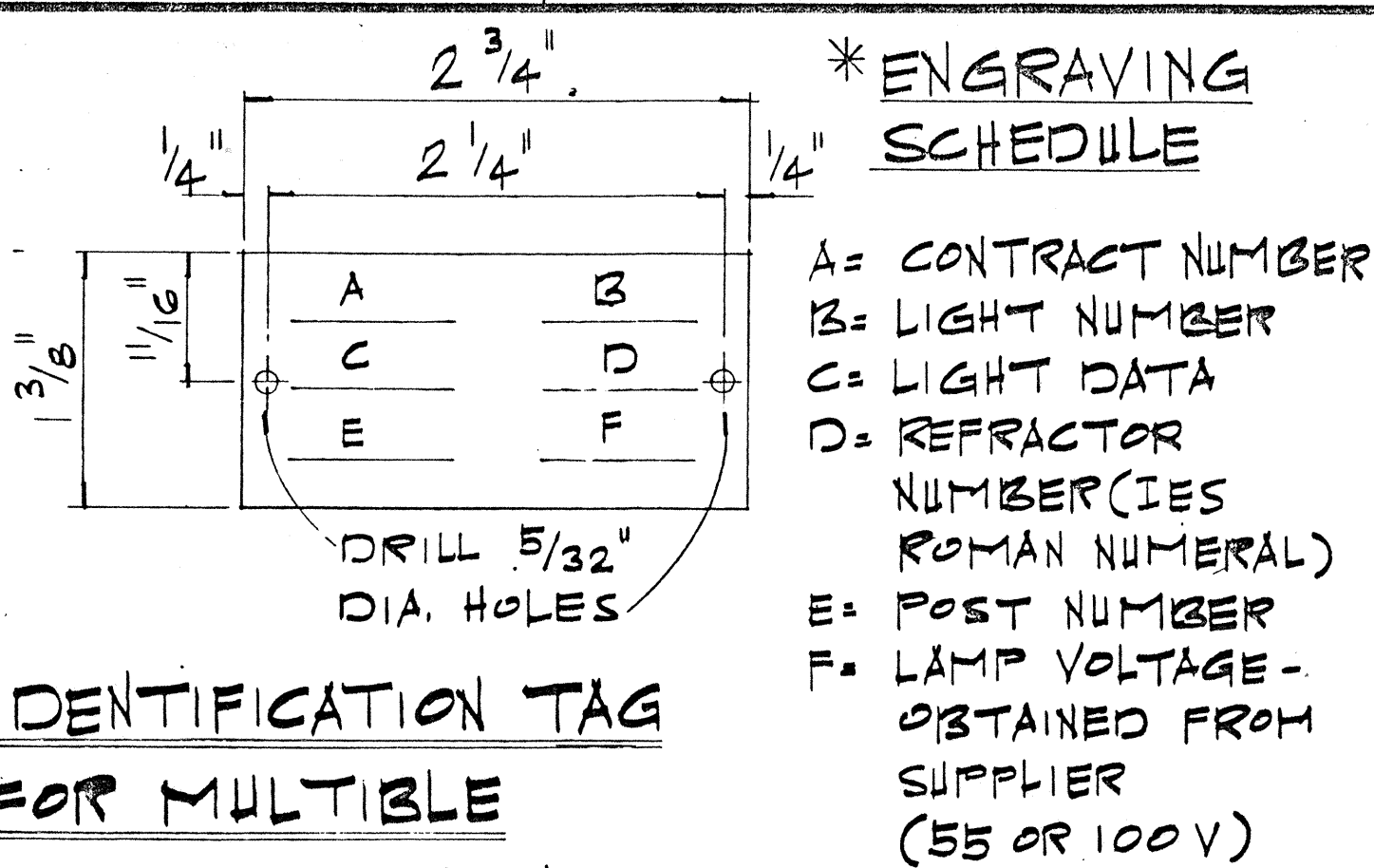


WIRING CONNECTION DIAGRAM



POLE MOUNTING DETAIL

SCALE: 3/4" = 1'-0"



IDENTIFICATION TAG FOR MULTIPLE STREET LIGHTING

NOT TO SCALE

NOTE:

- MAKE FROM 3-PLY LAMINATED PLASTIC (BLACK-WHITE-BLACK) W/ 1/5" HIGH COMMERCIAL GOTHIC LETTERS ENGRAVED.
- ATTACH TO POLE W/ #7 CADMIUM PLATED SCREWS.

* AS SHOWN ON PLANS

* ENGRAVING SCHEDULE

A= CONTRACT NUMBER
B= LIGHT NUMBER
C= LIGHT DATA
D= REFRACTOR NUMBER (IES ROMAN NUMERAL)
E= POST NUMBER
F= LAMP VOLTAGE - OBTAINED FROM SUPPLIER (55 OR 100 V)

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

TYPICAL DETAILS
HIGHWAY LIGHTING LUMINAIRE
MOUNTED ON METAL POLE

F.A. PROJECT NO. STP-058-1(2)
SCALE: AS SHOWN
DATE: MARCH 1992

SHEET NO. E3 OF 4 SHEETS

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NOTES

- All steel shafts, R's, mast arms, bolts, screws nuts & washers to be galv. after fab. or modification.
- R's to conform to ASTM A-36.
- Cast option to conform to ASTM A-486 CL.90.
- Torque $\frac{7}{8}$ " ϕ H.S. slip base P bolts to 84 ft. lbs.
- $\frac{7}{8}$ " ϕ H.S. anchor bars, wrench tighten-torque requirements waived
- Fabricators electing larger than min arm diameters must adjust details as required to permit solid seating of cap screws. In lieu of torque requirements for H.S. bolts, cap screws shall be tightened by the turn of nut method 1/6 turn from snug tight condition. No washer will be required.
- 4" x $6\frac{1}{2}$ " handhole reinforced w/#3 ga. ring $1\frac{1}{2}$ " wide welded to outside of pole cover of 10 ga. R locate 90 degrees of mast arm unless shown otherwise.
- 28 ga. keeper R. Place on top of middle flat washer ASTM A 526 125 commercial.
- Plate washer
- 3-7/8" ϕ H.S. bars, thread 6" & galv. 10", w/hex, hd, nut, leveling nut & washer
- Hex. hd. nut shown or as an alt. det. anchor R's may be retained w/5/16" fillet welds all round or formed heads.
- Round tapered steel tube w/max. taper of 0.15"/foot.
- No. 11 gage sheet steel of weldable grade acceptable if steel after fabrication has a min. yield strength of 40,000 p.s.i.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

HIGHWAY LIGHTING

SLIP BASE POLE

WAAPA ROAD & NAWILIWILI ROAD
INTERSECTION IMPROVEMENTS

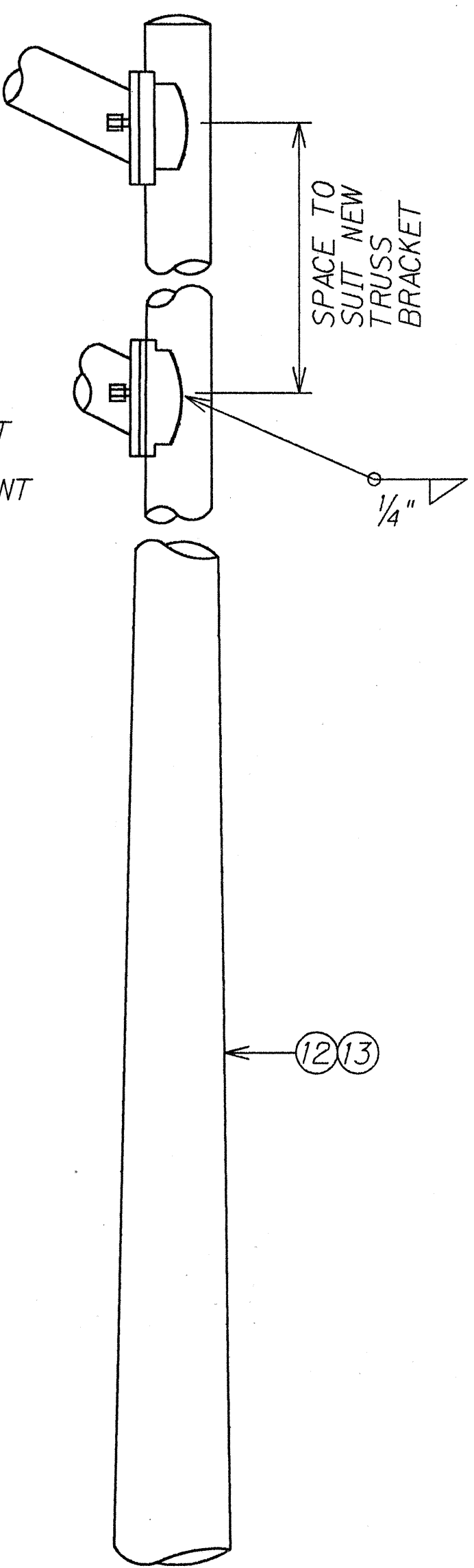
F.A. PROJECT NO. STP-058-1(2)

SCALE: AS SHOWN DATE: MARCH 1992

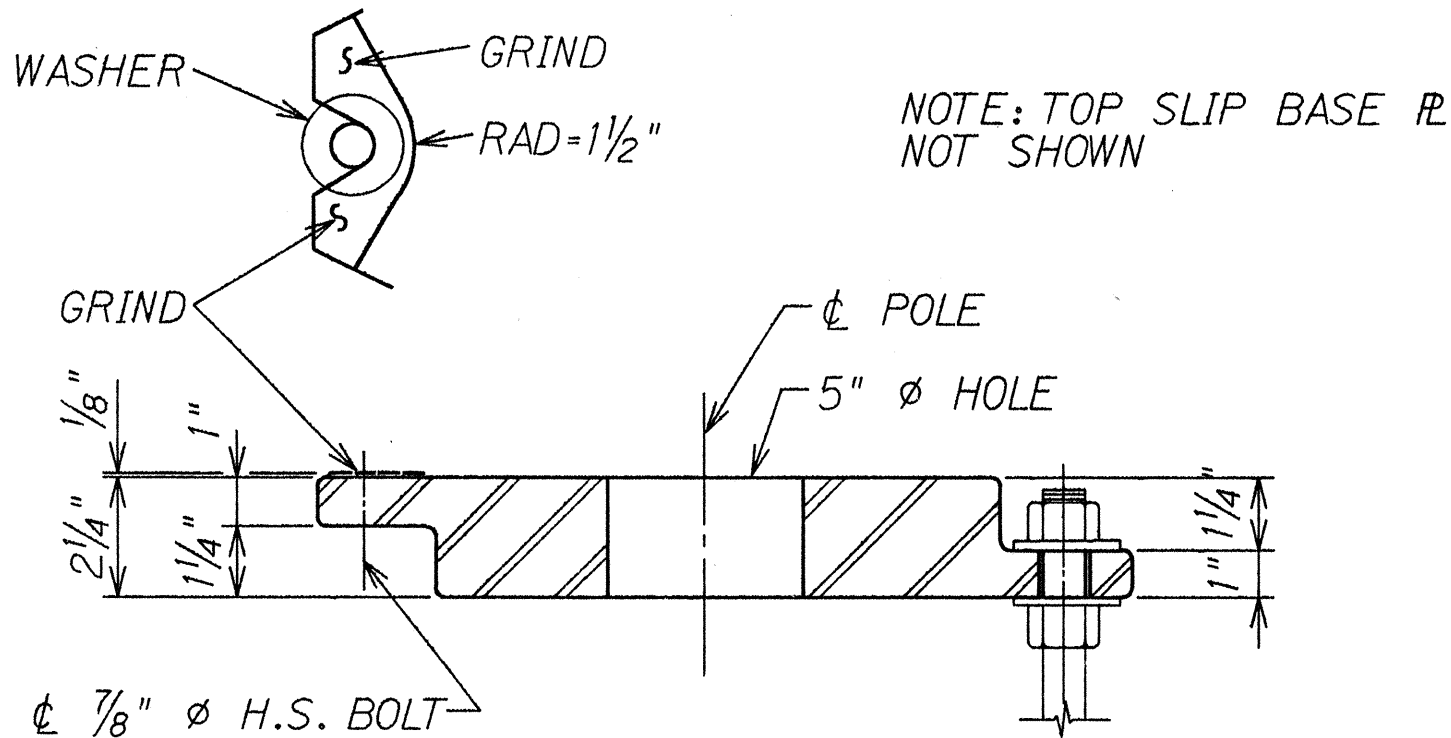
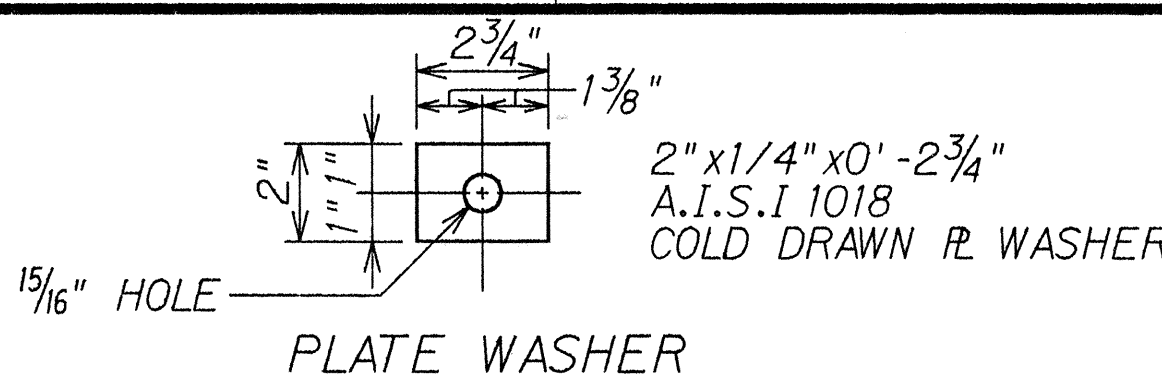
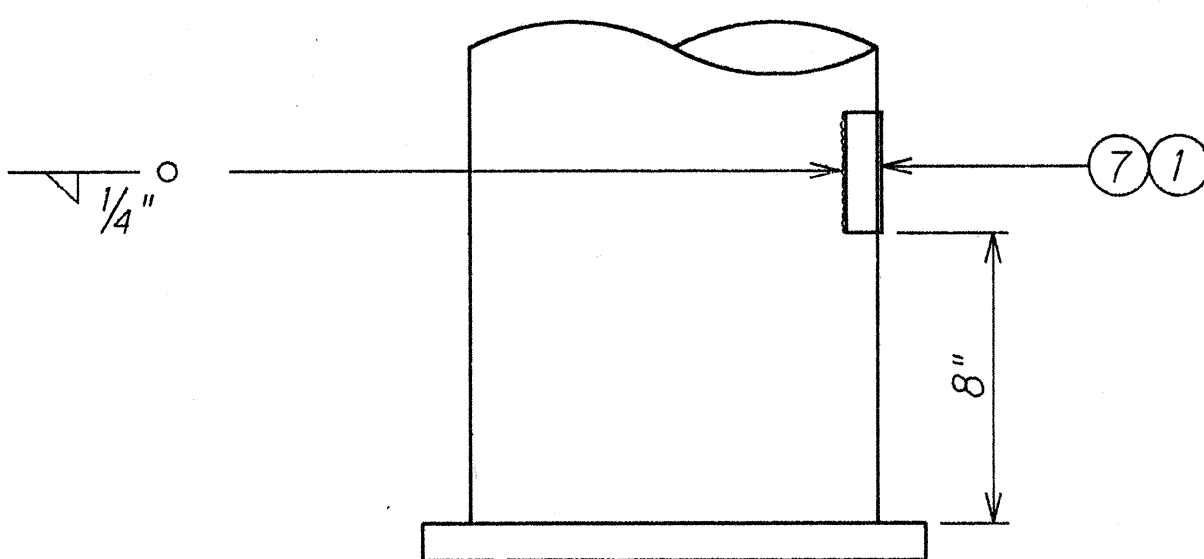
SHEET No. E4 OF 4 SHEETS

DETAIL "A"

TRUSS BRACKET
2 BOLTS
ARM ATTACHMENT

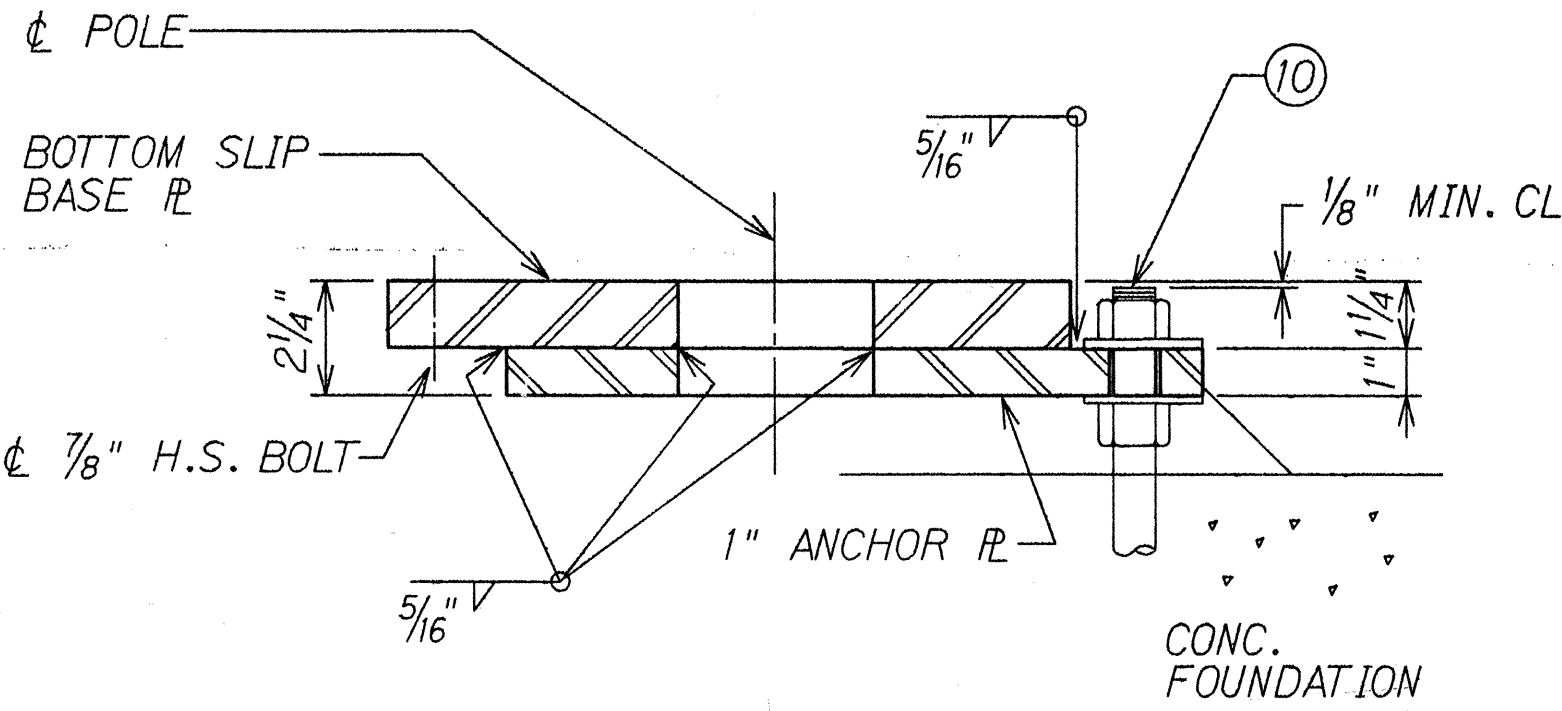


DETAIL "B"



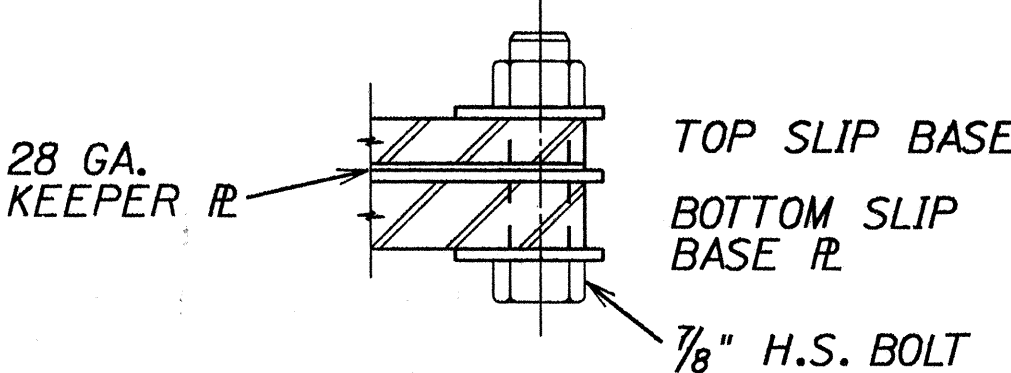
VIEW "E-E" CAST OPTION

SCALE: 3" = 1'-0"

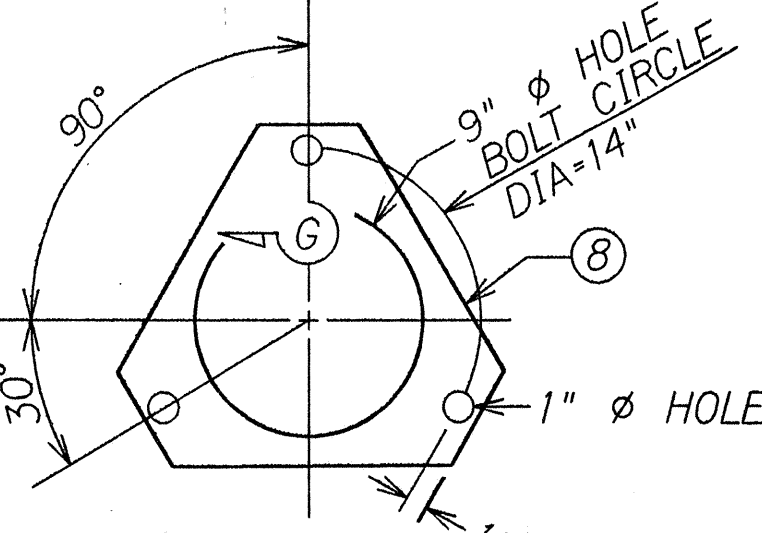


VIEW "E-E" WELDED OPTION

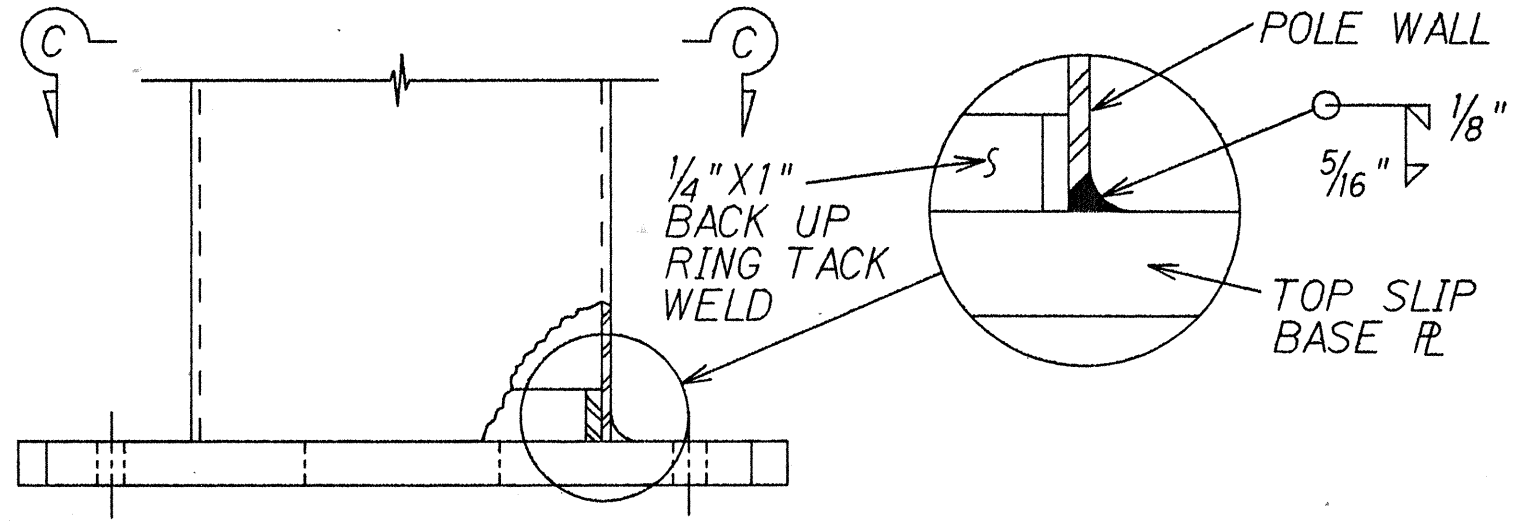
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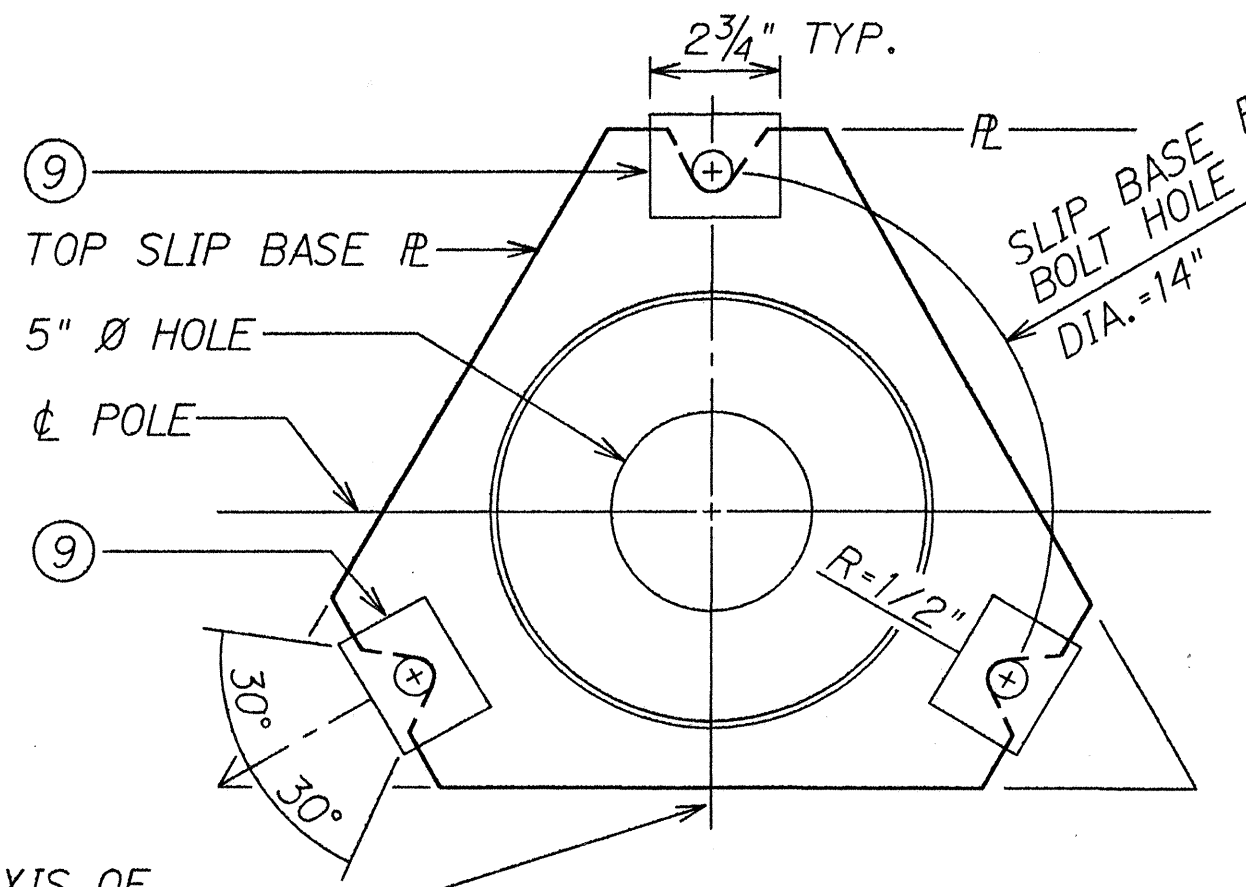
SECTION G-G



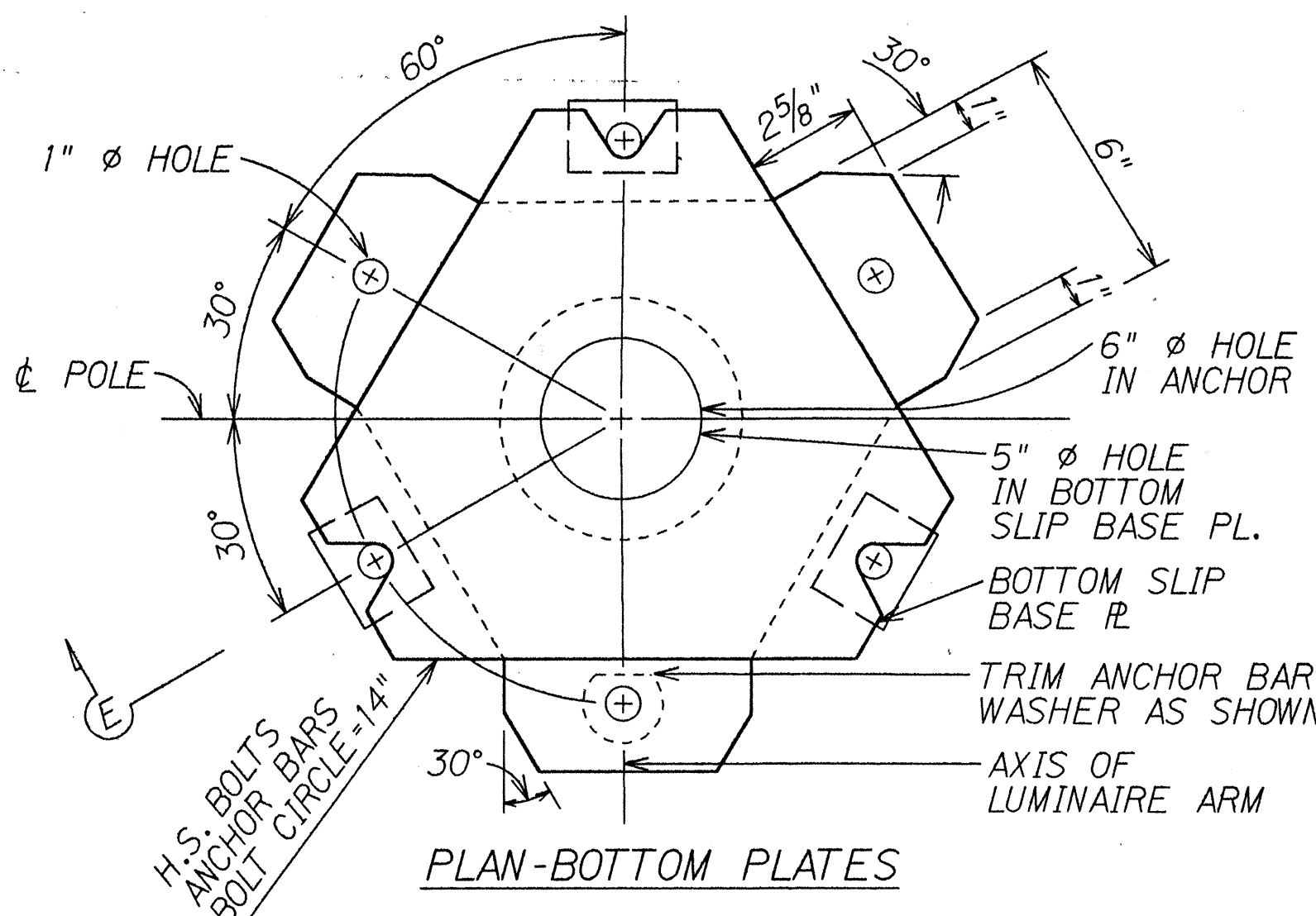
DETAIL "F" KEEPER PLATE



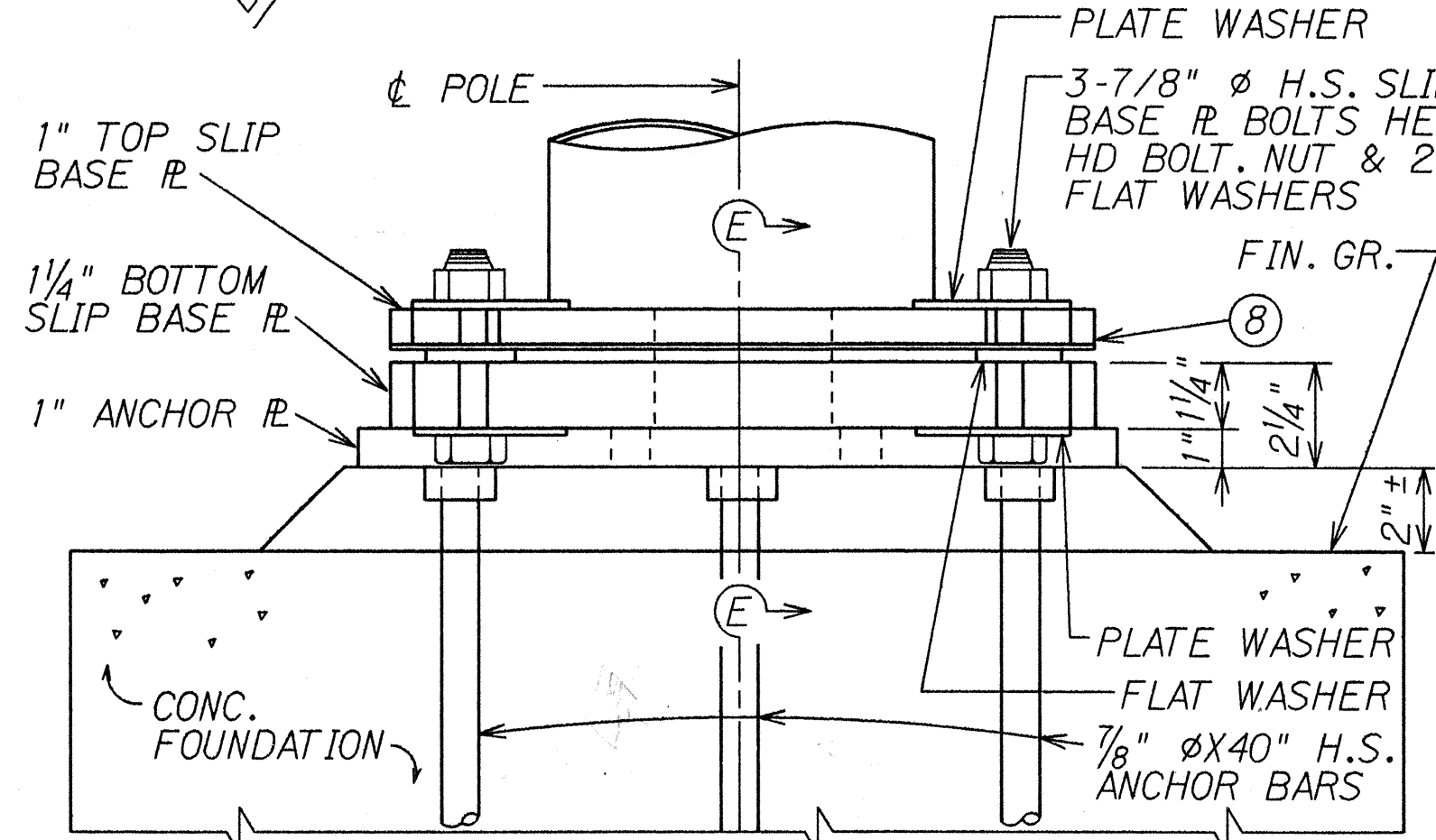
TOP SLIP BASE PLATE



VIEW "C-C" TOP SLIP BASE PLATE



PLAN-BOTTOM PLATES



BOTTOM SLIP BASE PLATE SLIP BASE DETAIL

SCALE: 3" = 1'-0"